IN THE CLAIMS

The claims are amended as follows:

1. (currently amended) A method for making an electrical inductor, the method comprising:

determining a desired magnetic volume of the inductor;

determining a desired area of a primary heat dissipation surface; and

determining remaining dimensions of the inductor based upon the magnetic volume and the primary heat dissipation surface area, such that the inductor has a height less than 40 percent of the diameter of the base surface.

2. (original) The method of claim 1, wherein the inductor has a cylindrical configuration, and the primary heat dissipation surface is a base surface having a predetermined diameter.

[4] 3. (canceled)

[5] 4. (currently amended) The method of claim [4] 1, wherein the inductor has a height less than 30 percent of the diameter of the base surface.

[6] 5. (currently amended) The method of claim [5] 4, wherein the inductor has a height less than 20 percent of the diameter of the base surface.

[9] 6. (currently amended) The method of claim [6] 5, wherein the primary heat dissipation surface is a base surface of the inductor.

[10] 7. (original) The method of claim 1, wherein the primary heat dissipation surface is configured to dissipate heat from the inductor via a conductive heat transfer mode.

[11] 8. (original) The method of claim 1, wherein the remaining dimensions of the inductor include a height dimension.

[12] 9. (original) The method of claim 1, wherein remaining dimensions of the inductor are determined such that lateral side surfaces have a collective area less than the desired area of the primary heat dissipation surface.

[13] 10. (canceled)

[14] 11. (original) An electrical inductor made in accordance with the method of claim 1.

[15] 12. (currently amended) An electrical inductor comprising:

a predetermined magnetic volume;

a primary heat dissipation surface having a desired surface area configured to transfer heat from the inductor in a conductive [move] mode of heat transfer; and

at least one lateral side surface configured to transfer heat in a convective mode of heat transfer, all side surfaces having a collective area less than the desired area of the primary heat dissipation surface, and wherein the height is less than 40 percent of the diameter.

[16] 13. (canceled)

[17] 14. (canceled)

[18] 15. (currently amended) The electrical inductor of claim [17] 12, wherein the height is less than 30 percent of the diameter.

[19] 16. (currently amended) The electrical inductor of claim [18] 15, wherein the height is less than 20 percent of the diameter.

[20] 17. (currently amended) An electrical inductor comprising:

a predetermined magnetic volume;

a primary heat dissipation surface having a desired surface area configured to transfer heat from the inductor in a conductive [move] mode of heat transfer; and

at least one lateral side surface configured to transfer heat in a convective mode of heat transfer, all side surfaces having a collective area less than the desired area of the primary heat dissipation surface;

wherein the primary heat dissipation surface is round and has a desired diameter, and the lateral side surface is a cylinder having a height computed by dividing the magnetic volume by the area of the primary heat dissipation surface.

[21] 18. (original) The electrical inductor of claim 20, wherein the height is less than 40 percent of the diameter.

[22] 19. (original) The electrical inductor of claim 21, wherein the height is less than 30 percent of the diameter.

[23] 20. (original) The electrical inductor of claim 22, wherein the height is less than 20 percent of the diameter.

[24] 21. (currently amended) An electrical inductor comprising:

a predetermined magnetic volume;

a primary heat dissipation surface having a desired surface area configured to transfer heat from the inductor in a conductive [move] mode of heat transfer; and

at least one lateral side surface configured to transfer heat in a convective mode of heat transfer, all side surfaces having a collective area less than the desired area of the primary heat dissipation surface;

wherein the primary heat dissipation surface is round and has a desired diameter, and the lateral side surface is a cylinder having a height computed by dividing the magnetic volume by the area of the primary heat dissipation surface, and wherein the height is less than 40 percent of the diameter.

[25] 22. (original) The electrical inductor of claim 24, wherein the height is less than 30 percent of the diameter.

[26] 23. (original) The electrical inductor of claim 25, wherein the height is less than 20 percent of the diameter.

24. (new) An electrical inductor comprising:

a predetermined magnetic volume;

a primary heat dissipation surface having a desired surface area configured to transfer heat from the inductor in a conductive mode of heat transfer; and

at least one lateral side surface configured to transfer heat in a convective mode of heat transfer, all side surfaces having a collective area less than 1.6 times the desired area of the primary heat dissipation surface.